



SGCN and Habitat Threats

Level 1 Threat Residential and Commercial Development

Level 2 Threat: Housing and Urban Areas

Human cities, towns, and settlements including non-housing development typically integrated with housing

Species Associated With This Threat:

SGCN Priority Level P1 = 59 / P2 = 83 / P3 = 11

Class Ray-finned Fishes (*Actinopterygii*)

SGCN Priority

Alewife (*Alosa pseudoharengus*)

1

Severity: Moderate Severity

Actionability: Moderately Actionable

Residential and urban development can lead to stressed runs. The specific causes of impact are increased non-point source pollution (heavy metals and nutrient inputs), increased turbidity, water withdrawals, disturbance of stream corridor and tree canopy over stream. Likelihood is high and increasing (high certainty), current spatial extent is Southern Maine, but expanding along coast, so actionability is moderate, i.e. the threat can be minimized in newly developing areas.

American Shad (*Alosa sapidissima*)

1

Severity: Moderate Severity

Actionability: Moderately Actionable

Residential and urban development can lead to stressed runs. The specific causes of impact are increased non-point source pollution (heavy metals and nutrient inputs), increased turbidity, water withdrawals, disturbance of stream corridor and tree canopy over stream. Likelihood is high and increasing (high certainty), current spatial extent is Southern Maine, but expanding along coast, so actionability is moderate, i.e. the threat can be minimized in newly developing areas.

Arctic Charr (*Salvelinus alpinus oquassa*)

1

Severity: Moderate Severity

Actionability: Actionable with Difficulty

Green Lake population only

Atlantic Salmon (*Salmo salar*)

1

Severity: High Severity

Actionability: Moderately Actionable

Residential and urban development impacts the streams water quality, Atlantic salmon habitat quality (rearing and spawning habitat), reduces stream canopy, increases stream temperature. Likelihood is high and increasing. Spatial extent is Maine.

Blueback Herring (*Alosa aestivalis*)

1

Severity: High Severity

Actionability: Moderately Actionable

Residential and urban development can lead to stressed runs. The specific causes of impact are increased non-point source pollution (heavy metals and nutrient inputs), increased turbidity, water withdrawals, disturbance of stream corridor and tree canopy over stream. Likelihood is high and increasing (high certainty), current spatial extent is Southern Maine, but expanding along coast, so actionability is moderate, i.e. the threat can be minimized in newly developing areas.



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Class	Ray-finned Fishes (<i>Actinopterygii</i>)	SGCN Priority
	Bridle Shiner (<i>Notropis bifrenatus</i>) Severity: Moderate Severity Actionability: Moderately Actionable Sedimentation and siltation subsequent to surface water run-off is a concern. BDS are known to be affected by poor water quality associated with sedimentation and siltation of habitats.	2
	Brook Trout (<i>Salvelinus fontinalis</i>) Severity: Moderate Severity Actionability: Moderately Actionable Improve riparian and shoreline buffer condition by using whatever tactic is appropriate for the area and local land use.	2
	Creek Chubsucker (<i>Erimyzon oblongus</i>) Severity: Moderate Severity Actionability: Moderately Actionable Riparian and shoreline areas proximal to occupied habitats can mitigate detrimental effects of developed landscapes.	2
	Landlocked Atlantic Salmon (<i>Salmo salar sebago</i>) Severity: Moderate Severity Actionability: Moderately Actionable Improve riparian and shoreline buffer condition by using whatever tactic is appropriate for the area and local land use.	2
	Rainbow Smelt (<i>Osmerus mordax</i>) Severity: High Severity Actionability: Moderately Actionable Residential and urban development has been statistically correlated with depleted smelt runs. The specific causes of impact are increased non-point source pollution (heavy metals and nutrient inputs), water withdrawals, disturbance of stream corridor and tree canopy over stream. Likelihood is high and increasing (high certainty), current spatial extent is Southern Maine, but expanding along coast, so actionability is moderate, i.e. the threat can be minimized in newly developing areas.	1
	Redfin Pickerel (<i>Esox americanus americanus</i>) Severity: Moderate Severity Actionability: Moderately Actionable RPK occur in coastal, southern ME areas with high development pressures. Maintaining or restoring shoreline or riparian areas to mature native vegetation conditions for a minimum of 100 feet from occupied habitats is a priority.	2
	Swamp Darter (<i>Etheostoma fusiforme</i>) Severity: Moderate Severity Actionability: Highly Actionable Protect shoreline and riparian areas from development pressures, improve shoreline and riparian condition where darters occur.	1

Class Amphibians (*Amphibia*)

SGCN Priority



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Class	Amphibians (<i>Amphibia</i>)	SGCN Priority
	Blue-spotted Salamander (<i>Ambystoma laterale</i>) Severity: High Severity Actionability: Moderately Actionable Loss and degradation of vernal pools and pocket swamps and the surrounding critical terrestrial habitat, especially in southern and central ME	3
	Northern Leopard Frog (<i>Lithobates pipiens</i>) Severity: Moderate Severity Actionability: Moderately Actionable Wetland habitat loss and degradation of riparian habitat quality and function	2
	Northern Spring Salamander (<i>Gyrinophilus porphyriticus porphyriticus</i>) Severity: Moderate Severity Actionability: Moderately Actionable Headwater streams receive limited protections; habitat loss and degradation of the shoreland zone affects water quality and riparian habitat quality and function	2
Class	Birds (<i>Aves</i>)	SGCN Priority
	American Kestrel (<i>Falco sparverius</i>) Severity: Moderate Severity Actionability: Moderately Actionable Housing and urban areas pose multiple direct and indirect threats, including building entrapment, collisions with vehicles, powerlines, buildings, and windows, along with exposure to environmental contaminants such as anticoagulant rodenticides, herbicides, and pesticides.	2
	American Woodcock (<i>Scolopax minor</i>) Severity: Moderate Severity Actionability: Moderately Actionable	2
	Arctic Tern (<i>Sterna paradisaea</i>) Severity: Moderate Severity Actionability: Moderately Actionable Human disturbance	1
	Baltimore Oriole (<i>Icterus galbula</i>) Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss and fragmentation in riparian and deciduous forests due to suburban expansion may reduce suitable breeding habitat, especially in rural–urban fringe areas. The species is tolerant of humans so zoning, municipal tree planting, and urban forestry can help mitigate impacts.	2
	Barn Swallow (<i>Hirundo rustica</i>) Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss and or fragmentation to development, loss of nesting sites due to modern building materials (e.g., vinyl, metal siding) and nest removal	2



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Class	Birds (<i>Aves</i>)	SGCN Priority
	Black Tern (<i>Chlidonias niger</i>) Severity: Moderate Severity Actionability: Highly Actionable Many nesting areas are within IWWH, however, the 250 ft upland area is not a no-build zone and thus development that negatively impacts the wetland habitat and quality can be permitted.	1
	Common Gallinule (<i>Gallinula galeata</i>) Severity: Moderate Severity Actionability: Highly Actionable Many nesting areas are within IWWH, however, the 250 ft upland area is not a no-build zone and thus development that negatively impacts the wetland habitat and quality can be permitted.	2
	Eastern Meadowlark (<i>Sturnella magna</i>) Severity: Moderate Severity Actionability: Moderately Actionable Development pressure in southern and central Maine continues to convert open fields into residential and commercial uses, permanently eliminating grassland habitat critical for meadowlark breeding. Land-use planning and conservation easements can mitigate these impacts.	1
	Field Sparrow (<i>Spizella pusilla</i>) Severity: Moderate Severity Actionability: Moderately Actionable Expansion of suburban and exurban development leads to permanent loss of breeding habitat. Unlike forest succession, these changes are essentially not reversible and reduce the extent of shrubby fields and old-field habitat.	2
	Grasshopper Sparrow (<i>Ammodramus savannarum</i>) Severity: Moderate Severity Actionability: Moderately Actionable GRSP are strongly tied to large, contiguous open grasslands, which are rare and shrinking in southern Maine where residential development pressure is high.	1
	Great Blue Heron (<i>Ardea herodias</i>) Severity: Moderate Severity Actionability: Moderately Actionable Disturbance associated with human activity in developed areas can cause colony abandonment.	2
	Horned Lark (<i>Eremophila alpestris</i>) Severity: Moderate Severity Actionability: Moderately Actionable Residential development along southern Maine's coast and in agricultural valleys has reduced or fragmented wintering habitat. Coastal dunes and upper beaches used are especially vulnerable to infill, lot expansion, and construction.	2
	Least Bittern (<i>Ixobrychus exilis</i>) Severity: Moderate Severity Actionability: Highly Actionable Many nesting areas are within IWWH, however, the 250 ft upland area is not a no-build zone and thus development that negatively impacts the wetland habitat and quality can be permitted.	1



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Class	Birds (<i>Aves</i>)	SGCN Priority
	Lesser Yellowlegs (<i>Tringa flavipes</i>) Severity: Moderate Severity Actionability: Moderately Actionable Can mitigate impacts through environmental permit review recommendations.	1
	Nelson's Sparrow (<i>Ammodramus nelsoni</i>) Severity: Moderate Severity Actionability: Moderately Actionable Coastal development fragments marshes and reduces available nesting habitat. Inadequate buffers and shoreline armoring can exacerbate impacts.	2
	Peregrine Falcon (<i>Falco peregrinus</i>) Severity: Moderate Severity Actionability: Moderately Actionable Pose multiple direct and indirect threats, including loss of nesting and foraging habitat due to development, inadequate nest substrate, entrapment in buildings, collisions with vehicles, aircraft, power lines, buildings, windows, as well as exposure to environmental contaminants such as anticoagulant rodenticides, herbicides, and pesticides. Site activities, including standard work, maintenance, construction, and inspection, can disturb breeding pairs, leading to the abandonment of the nest site, nest failure, or the mortality of young.	1
	Peregrine Falcon (<i>Falco peregrinus</i>) Severity: Moderate Severity Actionability: Moderately Actionable Protect important nesting and foraging habitat from residential and commercial development.	1
	Red Knot (<i>Calidris canutus rufa</i>) Severity: Moderate Severity Actionability: Highly Actionable Can minimize impacts with recommendations that avoid, mitigate or compensate project impacts through environmental permit review process.	1
	Roseate Tern (<i>Sterna dougallii</i>) Severity: Moderate Severity Actionability: Moderately Actionable Lack of Knowledge	1
	Ruddy Turnstone (<i>Arenaria interpres</i>) Severity: Moderate Severity Actionability: Moderately Actionable Development impacts can be mitigated through environmental permit review process.	2



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	Saltmarsh Sparrow (<i>Ammodramus caudacuta</i>) Severity: Moderate Severity Actionability: Moderately Actionable Coastal development contributes to coastal squeeze, where upland barriers like roads and buildings prevent tidal marshes from migrating inland in response to sea-level rise. This loss of migration space threatens the long-term persistence of Saltmarsh Sparrow habitat, even in otherwise intact marshes.	1
	Sanderling (<i>Calidris alba</i>) Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss from development can be mitigated through environmental permit review process.	2
	Sedge Wren (<i>Cistothorus stellaris</i>) Severity: Moderate Severity Actionability: Highly Actionable Many nesting areas fall within designated Inland Waterfowl and Wading Bird Habitat (IWWH), which includes a 250-foot upland buffer. However, this buffer is not a no-build zone, meaning development can still be permitted within it, even if it negatively impacts wetland quality or function. Wetland-adjacent nesting habitat for Sedge Wrens remains vulnerable to degradation despite IWWH designation.	1
	Semipalmated Sandpiper (<i>Calidris pusilla</i>) Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss from development can be mitigated through environmental permit review.	2
	Short-eared Owl (<i>Asio flammeus</i>) Severity: Moderate Severity Actionability: Moderately Actionable Loss of large, intact grasslands due to development and urban expansion.	1
	Solitary Sandpiper (<i>Tringa solitaria</i>) Severity: Moderate Severity Actionability: Highly Actionable Impacts from development can be mitigated through environmental review process.	3
	Veery (<i>Catharus fuscescens</i>) Severity: Moderate Severity Actionability: Moderately Actionable Fragmentation of forest patches reduces nesting success due to cowbird parasitism and predation. Relevant near suburbanizing rural areas.	2
	Vesper Sparrow (<i>Pooecetes gramineus</i>) Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss due to development reduces availability of suitable nesting areas, particularly in open, early successional landscapes and former agricultural lands.	2



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Class Birds (<i>Aves</i>)		SGCN Priority
Whimbrel (<i>Numenius phaeopus</i>)		2
Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss from development can be minimized through environmental permit review.		
Wood Thrush (<i>Hylocichla mustelina</i>)		1
Severity: Moderate Severity Actionability: Moderately Actionable Wood Thrush is area-sensitive and declines with development that reduces large, contiguous forest tracts or increases edge effects. Suburbanization increases cowbird parasitism (though this seems to be less of an issue in the Northeast than in the Mid-Atlantic and Midwest) and nest predation.		
Class Marine And Freshwater Molluscs (<i>Bivalvia</i>)		SGCN Priority
Brook Floater (<i>Alasmidonta varicosa</i>)		1
Severity: Moderate Severity Actionability: Moderately Actionable in riparian buffer where permanent land use changes and loss of intact forest canopy can degrade aquatic habitat integrity and water quality		
Tidewater Mucket (<i>Atlanticoncha ochracea</i>)		1
Severity: Moderate Severity Actionability: Moderately Actionable in riparian buffer where permanent land use changes and loss of intact forest canopy can degrade aquatic habitat integrity and water quality		
Yellow Lampmussel (<i>Lampsilis cariosa</i>)		1
Severity: Moderate Severity Actionability: Moderately Actionable in riparian buffer where permanent land use changes and loss of intact forest canopy can degrade aquatic habitat integrity and water quality		
Class Insects (<i>Insecta</i>)		SGCN Priority
American Bumble Bee (<i>Bombus pensylvanicus</i>)		3
Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss and fragmentation; can also create foraging habitat		
Appalachian Tiger Beetle (<i>Cicindela ancocisconensis</i>)		2
Severity: Moderate Severity Actionability: Moderately Actionable Development and accompanying increase in human activities on river cobble bars, sand bars, and banks can threaten this species		



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Class	Insects (<i>Insecta</i>)	SGCN Priority
	Arrow Clubtail (<i>Stylurus spiniceps</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable in riparian habitat where land use and loss of intact forest canopy can degrade aquatic habitat integrity and water quality	
	Barrens Itame (<i>Macaria exonerata</i>)	2
	Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME	
	Barrens Metarranthis Moth (<i>Metarranthis apiciaria</i>)	2
	Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME	
	Big Bluet (<i>Enallagma durum</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable direct impacts of development (e.g., filling or draining of small wetlands or vernal pools) destroys habitat and causes mortality of aquatic larvae; land use and loss of intact forest canopy in riparian habitat can degrade aquatic habitat integrity and water quality	
	Bold-based Zale Moth (<i>Zale lunifera</i>)	2
	Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME	
	Boreal Snaketail (<i>Ophiogomphus colubrinus</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable land use and loss of intact forest canopy in riparian habitat can degrade aquatic habitat integrity and water quality;	
	Broad Sallow (<i>Xylotype capax</i>)	2
	Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME	
	Brown's Comb Minnow Mayfly (<i>Ameletus browni</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable in riparian buffer where permanent land use changes, increased road crossings, and loss of intact forest canopy can degrade stream and riparian habitat integrity and water quality (i.e., recent increase in development pressure in western mountains)	



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Class	Insects (<i>Insecta</i>)	SGCN Priority
	Cobblestone Tiger Beetle (<i>Cicindela marginipennis</i>) Severity: Moderate Severity Actionability: Moderately Actionable Development and accompanying increase in human activities on river cobble bars can threaten this species	1
	Cobra Clubtail (<i>Gomphurus vastus</i>) Severity: Moderate Severity Actionability: Moderately Actionable in riparian habitat where land use and loss of intact forest canopy can degrade aquatic habitat integrity and water quality	2
	Cobweb Skipper (<i>Hesperia metea metea</i>) Severity: High Severity Actionability: Moderately Actionable	2
	Comet Darner (<i>Anax longipes</i>) Severity: High Severity Actionability: Moderately Actionable direct impacts of development (e.g., filling or draining of small wetlands or vernal pools) destroys habitat and causes mortality of aquatic larvae; land use and loss of intact forest canopy in riparian habitat can degrade aquatic habitat integrity and water quality; the small pond habitat this species inhabits is not well protected and vulnerable to development, especially in southern Maine	2
	Common Sanddragon (<i>Progomphus obscurus</i>) Severity: Moderate Severity Actionability: Moderately Actionable in riparian habitat where land use and loss of intact forest canopy can degrade aquatic habitat integrity and water quality	2
	Crowberry Blue (<i>Plebejus idas empetri</i>) Severity: Moderate Severity Actionability: Moderately Actionable Poorly planned coastal development in the riparian zone can alter peatland hydrology and/or nectar habitat	2
	Demaray's Primitive Minnow Mayfly (<i>Siphonurus demarayi</i>) Severity: Moderate Severity Actionability: Moderately Actionable in riparian buffer where permanent land use changes, increased road crossings, and loss of intact forest canopy can degrade stream and riparian habitat integrity and water quality (i.e., recent increase in development pressure in western mountains)	2
	Dusky Dancer (<i>Argia translata</i>) Severity: Moderate Severity Actionability: Moderately Actionable in riparian habitat where land use and loss of intact forest canopy can degrade aquatic habitat integrity and water quality	2



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Class	Insects (<i>Insecta</i>)	SGCN Priority
	Dusted Skipper (<i>Atrytonopsis hianna hianna</i>)	3
	Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME	
	Early Hairstreak (<i>Erora laeta</i>)	2
	Severity: Moderate Severity Actionability: Actionable with Difficulty Habitat loss and fragmentation; especially hard to address for this species since we lack spatial data on its occurrences	
	Eastern Buckmoth (<i>Hemileuca maia maia</i>)	2
	Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME	
	Edwards' Hairstreak (<i>Satyrrium edwardsii edwardsii</i>)	2
	Severity: High Severity Actionability: Moderately Actionable Habitat restricted to southern ME where loss and fragmentation to development is on-going	
	Hessel's Hairstreak (<i>Callophrys hesseli hesseli</i>)	1
	Severity: High Severity Actionability: Moderately Actionable Few occurrences documented; all in areas of southern Maine with active development in vicinity	
	Hoary Elfin (<i>Callophrys polios polios</i>)	2
	Severity: High Severity Actionability: Moderately Actionable unplanned development removes and degrades suitable habitat	
	Juniper Hairstreak (<i>Callophrys gryneus gryneus</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss and fragmentation in southern ME	
	Mocha Emerald (<i>Somatochlora linearis</i>)	1
	Severity: High Severity Actionability: Moderately Actionable Small streams are especially vulnerable to impacts from development in southern Maine.	
	Needhams Skimmer (<i>Libellula needhami</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable direct impacts of development (e.g., filling or draining of small wetlands or vernal pools) destroys habitat and causes mortality of aquatic larvae; land use and loss of intact forest canopy in riparian habitat can degrade aquatic habitat integrity and water quality	



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Class	Insects (<i>Insecta</i>)	SGCN Priority
	New England Bluet (<i>Enallagma laterale</i>)	3
	Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss and riparian zone degradation in an area of the state with relatively rapid development	
	Oblique Zale (<i>Zale obliqua</i>)	2
	Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME	
	Pine Barrens Zanclognatha (<i>Zanclognatha martha</i>)	2
	Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME	
	Pine Devil (<i>Citheronia sepulcralis</i>)	3
	Severity: High Severity Actionability: Moderately Actionable Habitat loss and fragmentation; pine barren habitat is prime land for development in southern ME	
	Pink Sallow (<i>Psectraglaea carnosae</i>)	3
	Severity: High Severity Actionability: Moderately Actionable Habitat loss and fragmentation; pine barren habitat is prime land for development in southern ME	
	Provancher's Armored Mayfly (<i>Baetisca rubescens</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable in riparian buffer where permanent land use changes, increased road crossings, and loss of intact forest canopy can degrade stream and riparian habitat integrity and water quality (i.e., recent increase in development pressure in western mountains)	
	Pygmy Snaketail (<i>Ophiogomphus howei</i>)	3
	Severity: Moderate Severity Actionability: Moderately Actionable Degradation of the riparian zone affects water quality and roosting/feeding habitat	
	Rambur's Forktail (<i>Ischnura ramburii</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable in riparian habitat where land use and loss of intact forest canopy can degrade aquatic habitat integrity and water quality	



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Class	Insects (<i>Insecta</i>)	SGCN Priority
	Red-winged Sallow (<i>Xystopeplus rufago</i>)	2
	Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME	
	Ringed Boghaunter (<i>Williamsonia lintneri</i>)	1
	Severity: High Severity Actionability: Moderately Actionable Habitat loss and riparian zone degradation in an area of the state with relatively rapid development	
	Roaring Brook Mayfly (<i>Epeorus frisoni</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable in riparian buffer where permanent land use changes, increased road crossings, and loss of intact forest canopy can degrade stream and riparian habitat integrity and water quality (i.e., recent increase in development pressure in western mountains)	
	Scarlet Bluet (<i>Enallagma pictum</i>)	3
	Severity: Moderate Severity Actionability: Moderately Actionable Habitat loss and riparian zone degradation in an area of the state with relatively rapid development	
	Similar Underwing (<i>Catocala similis</i>)	2
	Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME	
	Sleepy Duskywing (<i>Erynnis brizo</i>)	2
	Severity: High Severity Actionability: Moderately Actionable Habitat restricted to southern ME where loss and fragmentation to development is on-going	
	Southern Pygmy Clubtail (<i>Lanthus vernalis</i>)	3
	Severity: Moderate Severity Actionability: Moderately Actionable Headwater streams receive limited protections; degradation of the riparian zone affects water quality and roosting/feeding habitat	
	Spatterdock Darner (<i>Rhionaeschna mutata</i>)	2
	Severity: High Severity Actionability: Moderately Actionable direct impacts of development (e.g., filling or draining of small wetlands or vernal pools) destroys habitat and causes mortality of aquatic larvae; land use and loss of intact forest canopy in riparian habitat can degrade aquatic habitat integrity and water quality; the small pond habitat this species inhabits is not well protected and vulnerable to development, especially in southern Maine	



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Class Insects (<i>Insecta</i>)		SGCN Priority
Spicebush Swallowtail (<i>Pterourus troilus troilus</i>)		2
Severity: High Severity Actionability: Moderately Actionable in riparian buffer where permanent land use changes, increased road crossings, and loss of intact forest canopy can degrade stream and riparian habitat integrity and water quality		
Tomah Mayfly (<i>Siphonisca aerodromia</i>)		1
Severity: Moderate Severity Actionability: Moderately Actionable in riparian buffer where permanent land use changes, increased road crossings, and loss of intact forest canopy can degrade stream and riparian habitat integrity and water quality		
Twilight Moth (<i>Lycia rachelae</i>)		2
Severity: High Severity Actionability: Moderately Actionable loss and fragmentation of habitat; unprotected pine barrens are prime land for development in southern ME		
Waxed Sallow Moth (<i>Chaetagnalea cerata</i>)		3
Severity: High Severity Actionability: Moderately Actionable Habitat loss and fragmentation; pine barren habitat is prime land for development in southern ME		
Yellow Bumble Bee (<i>Bombus fervidus</i>)		2
Severity: Moderate Severity Actionability: Moderately Actionable while this species will use suburban gardens and parks for foraging, the loss of preferred grassland/field habitat to development can contribute to habitat loss and fragmentation		
Class Mammals (<i>Mammalia</i>)		SGCN Priority
New England Cottontail (<i>Sylvilagus transitionalis</i>)		1
Severity: Moderate Severity Actionability: Actionable with Difficulty Loss of habitat to development in S. Maine continues to fragment NEC habitat. However, Maine's ESA requires mitigation for loss of habitat, which may lessen the impact of development on this species.		
Class Horseshoe Crabs And Sea Scorpions (<i>Merostomata</i>)		SGCN Priority
Horseshoe Crab (<i>Limulus polyphemus</i>)		1
Severity: High Severity Actionability: Moderately Actionable Habitat degradation of estuaries and coastal areas cause decrease in available mating, egg-laying, larval development, and forage habitat. Likelihood is high and increasing (high certainty), current spatial extent is most severe in Southern Maine, but expanding along coast, so actionability is moderate, i.e. the threat can be minimized in newly developing areas.		
Class Reptiles (<i>Reptilia</i>)		SGCN Priority



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Blanding's Turtle (<i>Emydoidea blandingii</i>)		1
Severity: High Severity	Actionability: Moderately Actionable	
Habitat loss, degradation, and fragmentation from development and increased human activity		
Eastern Ribbonsnake (<i>Thamnophis saurita</i>)		2
Severity: High Severity	Actionability: Moderately Actionable	
Habitat loss and fragmentation from development		
Northern Black Racer (<i>Coluber constrictor constrictor</i>)		1
Severity: High Severity	Actionability: Moderately Actionable	
Habitat loss from development and associated fragmentation and anthropogenic activities are substantial threats		
Spotted Turtle (<i>Clemmys guttata</i>)		1
Severity: High Severity	Actionability: Moderately Actionable	
Habitat loss, degradation, and fragmentation from development and increased human activity		
Wood Turtle (<i>Glyptemys insculpta</i>)		1
Severity: High Severity	Actionability: Moderately Actionable	
Habitat loss, degradation, and fragmentation from development and increased human activity		
Class Eudicots (<i>Eudicots</i>)		SGCN Priority
American Chestnut (<i>Castanea dentata</i>)		2
Severity: Moderate Severity	Actionability: Moderately Actionable	
Barren-strawberry (<i>Geum fragarioides</i>)		1
Severity: Moderate Severity	Actionability: Moderately Actionable	
Beach Plum (<i>Prunus maritima</i>)		1
Severity: High Severity	Actionability: Moderately Actionable	
Bitternut Hickory (<i>Carya cordiformis</i>)		2
Severity: Moderate Severity	Actionability: Moderately Actionable	
Chestnut Oak (<i>Quercus montana</i>)		2
Severity: Moderate Severity	Actionability: Moderately Actionable	
Comb-leaved Mermaid-weed (<i>Proserpinaca pectinata</i>)		2
Severity: Moderate Severity	Actionability: Moderately Actionable	



SGCN and Habitat Threats

Level 2 Threat: Housing and Urban Areas

Class	Eudicots (<i>Eudicots</i>)	SGCN Priority
	Flowering Dogwood (<i>Benthamidia florida</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Great Rhododendron (<i>Rhododendron maximum</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Hairy Boneset (<i>Eupatorium pubescens</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Hairy Bush-clover (<i>Lespedeza hirta</i> ssp. <i>hirta</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Ink-berry (<i>Ilex glabra</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Marsh-elder (<i>Iva frutescens</i> ssp. <i>oraria</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
	Missouri Rockcress (<i>Boechera missouriensis</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Mountain Honeysuckle (<i>Lonicera dioica</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Mountain-laurel (<i>Kalmia latifolia</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Narrow-leaved Goldenrod (<i>Euthamia caroliniana</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Northern Blazing Star (<i>Liatris novae-angliae</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Nova Scotia Agalinis (<i>Agalinis neoscotica</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Rattlesnake Hawkweed (<i>Hieracium venosum</i> var. <i>nudicaule</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Scarlet Oak (<i>Quercus coccinea</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	



SGCN and Habitat Threats

Level 2 Threat: Housing and Urban Areas

Class	Eudicots (<i>Eudicots</i>)	SGCN Priority
	Seneca Snakeroot (<i>Polygala senega</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Spotted Wintergreen (<i>Chimaphila maculata</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Summer Grape (<i>Vitis aestivalis</i> var. <i>bicolor</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Unicorn Root (<i>Aletris farinosa</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Upland Boneset (<i>Eupatorium sessilifolium</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Upright Bindweed (<i>Calystegia spithamea</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	White-topped Aster (<i>Sericocarpus asteroides</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
Class	Clubmoss (<i>Lycopodiopsida</i>)	SGCN Priority
	Foxtail Bog-clubmoss (<i>Lycopodiella alopecuroides</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Southern Bog-clubmoss (<i>Lycopodiella appressa</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
Class	Monocots (<i>Monocots</i>)	SGCN Priority
	Bicknell's Sedge (<i>Carex bicknellii</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Canada Mountain-ricegrass (<i>Piptatherum canadense</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Cliff Muhly (<i>Muhlenbergia sobolifera</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Clothed Sedge (<i>Carex vestita</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	



SGCN and Habitat Threats

Level 2 Threat: Housing and Urban Areas

Class	Monocots (<i>Monocots</i>)	SGCN Priority
	Dawn-land Sedge (<i>Carex waponahkikensis</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Dwarf Bulrush (<i>Lipocarpus micrantha</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Houghton's Flatsedge (<i>Cyperus houghtonii</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Long-tubercled Spike-rush (<i>Eleocharis tuberculosa</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Muhlenberg Sedge (<i>Carex muehlenbergii</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Orono Sedge (<i>Carex oronensis</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Sharp-scaled Manna-grass (<i>Glyceria acutiflora</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Slender Spikerush (<i>Eleocharis nitida</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Small Whorled Pogonia (<i>Isotria medeoloides</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Spreading Sedge (<i>Carex laxiculmis</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Swarthy Sedge (<i>Carex adusta</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Variable Sedge (<i>Carex polymorpha</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
Class	Fern (<i>Polypodiopsida</i>)	SGCN Priority
	Adder's Tongue Fern (<i>Ophioglossum pusillum</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	



SGCN and Habitat Threats

Level 2 Threat: Housing and Urban Areas

Class	Fern (<i>Polypodiopsida</i>)	SGCN Priority
	Blunt-lobed Woodsia (<i>Woodsia obtusa</i>)	1
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Broad Beech Fern (<i>Phegopteris hexagonoptera</i>)	2
	Severity: Moderate Severity Actionability: Moderately Actionable	
	Moonwort (<i>Botrychium lunaria</i>)	1
	Severity: High Severity Actionability: Moderately Actionable	
	Pale Moonwort (<i>Botrychium pallidum</i>)	2
	Severity: High Severity Actionability: Moderately Actionable	
Habitats Associated With This Threat:		
Macrogroup	Acadian-Northern Appalachian Forest	
	Acadian Low Elevation Spruce-Fir-Hardwood Forest	
	Development is generally a lower stressor moving north and into unorganized towns; boreal upland forest had comparatively low predicted development in Anderson et al (2013)	
	Acadian Sub-boreal Spruce Flat	
	Development is generally a lower stressor moving north and into unorganized towns; boreal upland forest had comparatively low predicted development in Anderson et al (2013)	
	Acadian-Appalachian Montane Spruce-Fir Forest	
	Development is generally a lower stressor moving north and into unorganized towns; boreal upland forest had comparatively low predicted development in Anderson et al (2013)	
	Acadian-Northern Appalachian Forest Macrogroup- Unknown Habitat System	
	Residential development rates highest in suburban areas of southern/coastal ME; Development is generally a lower stressor moving north and into unorganized towns; boreal upland forest had comparatively low predicted development in Anderson et al (2013)	
	Laurentian-Acadian Northern Hardwood Forest	
	Residential development rates highest in suburban areas of southern/coastal ME	
	Laurentian-Acadian Pine-Hemlock-Hardwood Forest	
	Residential development rates highest in suburban areas of southern/coastal ME	
	Laurentian-Acadian Sub-boreal Dry-Mesic Pine-Black Spruce-Hardwood Forest	
	Development is generally a lower stressor moving north and into unorganized towns; boreal upland forest had comparatively low predicted development in Anderson et al (2013)	
Macrogroup	Appalachian Oak - Pine Forest & Woodland	
	Appalachian Oak - Pine Forest & Woodland Macrogroup - Unknown Habitat System	
	Many areas have been conserved, but private lands remain vulnerable to development	
Macrogroup	Coastal Plain Evergreen Hardwood - Conifer Swamp	



SGCN and Habitat Threats

Level 2 Threat: Housing and Urban Areas

Macrogroup Coastal Plain Evergreen Hardwood - Conifer Swamp

Coastal Plain Evergreen Hardwood - Conifer Swamp Macrogroup- Unknown Habitat System

Most AWC Swamps are already protected so likelihood is low

North Atlantic Coastal Plain Basin Peat Swamp

Many AWC Swamps are conserved, but those in private ownership remain vulnerable due to relatively high development in southern and coastal ME

Macrogroup Eastern North American Marsh, Wet Meadow & Shrubland

Introduced Wetland and Riparian Vegetation

Most future impacts associated with secondary effects including runoff, landscape context etc.

Laurentian-Acadian Freshwater Marsh

Most future impacts associated with secondary effects including runoff, landscape context etc.

Laurentian-Acadian Wet Meadow-Shrub Swamp

Most future impacts associated with secondary effects including runoff, landscape context etc.

Macrogroup Intertidal Gravel Shore

High Intertidal

Shoreline development can introduce foot and vehicle traffic, pets, noise, light, and trash that can degrade habitat area and functions

Lower Intertidal

Shoreline development can introduce foot and vehicle traffic, pets, noise, light, and trash that can degrade habitat area and functions

Mid-Intertidal

Shoreline development can introduce foot and vehicle traffic, pets, noise, light, and trash that can degrade habitat area and functions

Macrogroup Intertidal Sandy Shore

Sand Beach

Shoreline development can introduce foot and vehicle traffic, pets, noise, light, and trash that can degrade habitat area and functions

Sand Flat

Shoreline development can introduce foot and vehicle traffic, pets, noise, light, and trash that can degrade habitat area and functions

Submerged Aquatic Vegetation

Shoreline development can introduce foot and vehicle traffic, pets, noise, light, and trash that can degrade habitat area and functions

Macrogroup Laurentian-Acadian Calcareous Scrub & Grassland

Laurentian-Acadian Calcareous Rocky Outcrop

Many areas have been conserved, but private lands remain vulnerable to development

Laurentian-Acadian Calcareous Rocky Outcrop

Outcrops may be attractive for development of second home sites



SGCN and Habitat Threats

Level 2 Threat: Housing and Urban Areas

Macrogroup Laurentian-Acadian Flooded & Swamp Forest

Acadian-Northern Appalachian Conifer Seepage Forest

Most future impacts associated with secondary effects including runoff, landscape context etc.

Laurentian-Acadian Alkaline Conifer-Hardwood Swamp

Most future impacts associated with secondary effects including runoff, landscape context etc.

Laurentian-Acadian Flooded & Swamp Forest Macrogroup- Unknown Habitat System

Most future impacts associated with secondary effects including runoff, landscape context etc.

Laurentian-Acadian Flooded & Swamp Forest Macrogroup- Unknown Habitat System

Floodplain forests had relatively high predicted development rates in Anderson et al (2013)

Laurentian-Acadian Floodplain Forest

Floodplain forests (and adjacent uplands) had relatively high predicted development rates in Anderson et al (2013)

Northern Appalachian-Acadian Conifer-Hardwood Acidic Swamp

Most future impacts associated with secondary effects including runoff, landscape context etc.

Macrogroup Lentic

Vernal Pool

pools in residential areas subject to human and pet disturbance

Macrogroup North American Atlantic Coastal Beach & Rocky Shore

Northern Atlantic Coastal Plain Sandy Beach

Many dunes have been and continue to be impacted, despite some legal protections

Macrogroup North American Atlantic Coastal Dune, Grassland & Rocky Headland

Northern Atlantic Coastal Plain Dune and Swale

Many dunes have been and continue to be impacted, despite some legal protections

Macrogroup North American Freshwater Coastal Beach & Rocky Shore

Laurentian-Acadian Lakeshore Beach

housing development close to pondshore and resulting pesticides, runoff from lawns, erosion and siltation, and invasive species

Macrogroup North Atlantic Coastal Forest & Woodland

North Atlantic Coastal Plain Maritime Forest

Residential development rates highest in suburban areas of southern/coastal ME

Northern Atlantic Coastal Plain Pitch Pine Barrens

Residential development rates highest in suburban areas of southern/coastal ME

Macrogroup Urban-Suburban Built

Residential - Rural-Sparse

windows a significant threat to birds



SGCN and Habitat Threats

Level 2 Threat: Housing and Urban Areas

The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, threats, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.